

Remarks

Claims 13 to 16 and 21 to 24 are amended and claims 25 to 30 are added. Claims 13 to 30 are pending in this application of which claims 13, 23 and 25 are in independent form.

Claims 13 to 24 were rejected under 35 USC 103(a) as being unpatentable over JP '517 in view of JP '741, Koch et al and Balzer et al. The following will show that claim 13, as amended, patentably distinguishes the applicants' invention over this combination of references.

As noted in the action, the opposite ends of elastic strip 1C in JP '517 are bonded to the internal surface 31 as shown in FIG. 10 of this reference. The middle portion of the elastic strip 1C is not bonded to the internal surface of the tire so even if the tire internal surface deforms, the deformation force is not directly applied to the transponder body 1A.

Although the middle portion of the elastic strip 1C is not attached to the inner wall surface of the tire, it is attached at both ends so that substantial vibrations via the strip can be transmitted to the transducer.

In contrast to JP '517, the applicants' invention provides for a strip of material subdivided into a first portion which is fixedly connected to the inner wall surface of the tire. However, and in contrast to JP '517, the second portion is unattached to the inner wall surface over its entire length. This feature and limitation of the applicants' invention is set

forth in claim 13 with the clause:

"said second portion of said strip having a predetermined length and being clear of and unattached to said inner wall surface over all of said predetermined length;" (emphasis added)

The above clause is followed by the last clause which recites where the substrate is connected:

"said substrate being releasably connected to said second portion of said strip." (emphasis added).

The above clause emphasizes that the substrate is connected to the second portion of the strip of material so that it is relatively unaffected by movement of the wall of the tire. The substrate is essentially cantilevered within the tire.

As explained in the applicants' disclosure, on page 2, line 20:

"An advantage of the invention is especially seen in that the loads acting on the transponder and the substrate are significantly reduced by the type of connection in accordance with the invention. With this arrangement in accordance with the invention, the portion of the thrust stresses and normal stresses transmitted to the transponder are negligibly small. This effect applies likewise for the bending load which acts on the transponder during operation of the tire and is considerably reduced by the targeted decoupling."

The first portion of the strip of material is affixed to the inner wall surface of the tire and the second portion is entirely clear thereof over the predetermined length of the second portion whereat the substrate and the transponder disposed therein is connected so as to be substantially free of lateral load and load

in general which could come from the inner wall of the tire. This is so because the second portion of the strip is essentially cantilevered.

There is no suggestion in JP '517 which could lead our person of ordinary skill to arrive at the idea of keeping the second portion of the strip of material completely unattached to and clear of the inner wall surface.

The secondary reference, JP '741, was cited because it teaches a transponder chip embedded in a substrate. However, this reference cannot fill the void left by JP '517 because nowhere therein is there any indication of using a second portion of a strip of material which is completely clear of and unattached to the inner wall surface of the tire. Balzer et al was recited because of the releasable connection suggested therein and Koch et al teaches a method for embedding a monitoring device within the tire during manufacture.

Thus, from the foregoing, it can be seen that none of the secondary references JP '741, Balzer et al and Koch et al offer any suggestion which could enable our person of ordinary skill to fill the void left by JP '517.

The idea of providing a strip of material subdivided into two portions with the first portion attached to the wall surface of the tire and the second portion clear of and unattached to the inner wall surface of the tire over its entire predetermined length is new and not made obvious by the references applied against claim 13. Accordingly, applicants submit that claim 13 should now patentably distinguish their invention over the combination of JP '517, JP '741, Koch et al and Balzer et al and

be allowable. Claim 23 has been amended to include features of claim 13 with respect to the strip of material and substrate and should now too be allowable.

Claim 25 is added to cover the embodiment of FIG. 4 and incorporates many of the same features and limitations with respect to the middle tab recited therein as do claims 13 and 23 with respect to the second portion of the strip of material. The remaining claims are all dependent from one of the three independent claims so that they too should now be allowable.

Applicants add that claim 14 too has been amended and emphasizes that the substrate has a clear through opening formed therein and that the second portion of the strip passes through this clear through opening from below the substrate and is releasably connected to the substrate at the upper side thereof as set forth at claim 14 with the clause:

"... said substrate has an upper side and a clear-through opening formed therein; and, said second portion of said strip passes through said clear-through opening from below said substrate and is releasably connected to said substrate at said upper side thereof." (emphasis added)

Nowhere in the art of record is there any suggestion of providing a clear-through opening or slot in the substrate itself and passing the second portion of the strip of material therethrough from below as shown in FIG. 1 of applicants' drawings. This feature and limitation places the applicants' invention well beyond reach of our artisan exercising only ordinary skill.

For the reasons advanced above, the claims, as amended,

should now all patentably distinguish the applicants' invention  
over the applied references and be allowable.

Reconsideration of the application is earnestly solicited.

Respectfully submitted,



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